Season's Greetings!

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Newsline

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PEOPLE

Joan Checholik retires to enjoy some fun and sun

Known for her love of Las Vegas, Joan Checholik says that after she leaves the Alberta Research Council this December she would like to learn how to be a blackjack dealer and work at the local casinos.

Assistant to the vice-president, Resource Technologies, Joan will celebrate her retirement and some Christmas cheer with her colleagues Thursday, December 20, 1990 in the west atrium of the Mill Woods building. She retires officially March 1, 1991.

She joined the Research Council 20 years ago, providing part-time clerical assistance to all members of the Alberta Geological Survey.

Originally, Joan was slated to work two to three days/week for three to four hours/day. It was not long, however, before demands within the department dictated that she work every day as a permanent part-time employee.

Towards the end of 1980, Joan applied for and received a full-time position as executive secretary to Dr. Ken Babcock, who was then vice-president of the Natural Resources Division.

Joan Checholik

In 1986, she was seconded to Records Management. Here, Joan worked with a consultant from Alberta Energy, who had been loaned to the Research Council to develop a central filing system in the executive area. By the time she left this position, 18 months later, Joan had accomplished the original objective and developed a filing system for the Alberta Geological Survey.

She then returned to her position with Dr. Babcock, who had since been repositioned as vice-president of Energy. When he left the organization two years ago, Joan returned to the Natural Resources Division, as executive secretary to Dr. Bob Fessenden.

Joan says that while her time with the Research Council has been challenging, it has also been fun.

"Over the years my role within the division has shifted away from secretarial duties to more administrative work. This has increased the job's interest – you learn a lot about every kind of research – and the degree of skill required. I can see this changing even more in the future as the vice-presidents become increasingly busy and need even more administrative assistance.

"I feel fortunate, however, to have always worked with really good people who treated me as a professional in my own field. They made my time with the Research Council enjoyable and fun."

Immediate plans for retirement include a six-week trip to Arizona in March. On the way back, she and her husband, John, may do some visiting through Utah and Bryce Canyon National Park.

Joan says, "I don't believe we will ever be the kind of people to spend six months away each year, but we do enjoy our trips down south and will probably spend at least a couple of months away every winter."

Other plans include a return to curling and as much golf as she can manage. "I will remain a member of the Riverside Business Girls Club, which golfs Tuesday nights, and also join the Riverside Ladies Golf Club, which plays during the day."

She also is willing to come back to the Research Council on occasion, perhaps as summer relief. Other than that, Joan says she has no big plans and will stay in Edmonton.

Don't forget to join Joan in celebrating her retirement — Thursday, December 20 at 3:30 p.m., in the west atrium.

AT A GLANCE

- ✶ Joan Checholik retires
- ✶ Department collaboration
- ✶ Feedback Corner
- ✶ Promoting S&T
- ✶ Awards program update
- ✶ AEC technical visit
- ✶ United Way hits target
- ✶ Talkback – employee turnover

Newsline is a monthly publication for the employees of the Alberta Research Council.

Please send all submissions
and direct all questions to
Carmen Forster
Alberta Research Council
PO Box 8330, Postal Station F
Edmonton, Alberta
T6H 5X2

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DEPARTMENTS

Department collaboration results in increased efficiency

Expertise within the research departments of the Alberta Research Council is available to internal as well as external clients.

Biotechnology Department staff put this fact to good use recently, by working with members of the Advanced Computing and Engineering Department to investigate ways to automate scheduling for the operation of their fermentation pilot plant.

Currently, this task is performed manually and includes shift assignment of operators, and time and equipment allocation for the fermenting operations. The manual production of a such a complex schedule is, however, time-consuming and often unsatisfactory.

The idea of a collaborative project to automate this process was first discussed in 1988 by Dr. David Cox, then head of Biotechnology, and Dr. Ernie Chang, head of Advanced Computing and Engineering. Ken Gamble, Advanced Computing and Engineering, was assigned as technical advisor and, with his staff, proposed developing a computer scheduling system for the plant.

Lorne Duncan, systems manager for Biotechnology, says he and his colleagues looked at several external solutions. "Advanced Computing and Engineering offered us a better solution, one that was much more specific to our operation."

Meg Mendoza and Vickitt Lau, knowledge engineers with Advanced Computing and Engineering's Artificial Intelligence (AI) Operations Group, were assigned the task. In working on the SABIO (Scheduling Assistant for BIOtechnology) project, both Meg and Vickitt recognized the potential for applications of AI in the scheduling of personnel and equipment. SABIO experiments with AI techniques, as applied to real-world operations of scheduling, now form a continuing internal project.

In researching the project, Meg visited the pilot plant and interviewed plant staff. "Biotechnology staff were excited about possible solutions to their problems. I also learned more about another Research Council department ... including what fermentors smell like!"

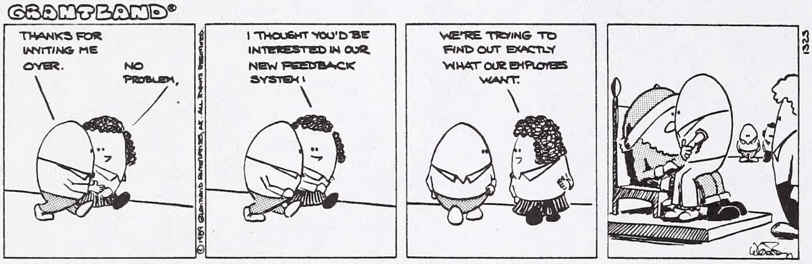
She completed the first phase of SABIO on a Symbolics computer. During the second phase, Vickitt re-implemented the system on a Macintosh computer.

Meg and Vickitt have now completed the basic framework. The system now generates personnel schedules based on shift constraints. A more advanced version will be able to make general scheduling suggestions or automatically produce the entire schedule.

"It looks like it will be a very promising and beneficial system once it is fully developed," says Lorne. "We are enthusiastic about it being available on the Mac. The project introduced us to AI capabilities and taught us something about the activities of the Advanced Computing and Engineering Department."

The SABIO prototype has assisted the Advanced Computing and Engineering Department in demonstrating the application of leading-edge AI techniques to potential clients. Department staff have since won a contract with Greyhound Lines of Canada Ltd., and bid on other potentially lucrative contracts involving the management of complex scheduling tasks.

On the home front, department staff are now pursuing collaborative projects with the Oil Sands and Hydrocarbon Recovery Department and Financial Services.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FEEDBACK CORNER

In the November issue of Newsline, we asked staff who they felt they could turn to if they had a concern or question. Responses to date are shown below. Anyone still wishing to respond to these questions is encouraged to do so. Send your response to Wolf Gut, Human Resources, via e-mail or anonymously through the mail.

Q. Do you feel you can talk a complaint over with your:

Supervisor?	Department Head	Human Resources Department
Yes 11 No 1	**Yes 11 No 4**	**Yes 8 No 7**

This month's question comes from Wolf Gut, Human Resources. Those wishing to respond should clip the question below and return their response to Wolf by December 14.

Q. Research Council management is open to new ideas and independent thinking.

Strongly Disagree 1 2 3 4 5 **Strongly Agree**

Explanation: Challenging the status quo and persisting in that challenge does not always result in success; it can sometimes produce discouragement and a reluctance to propose new ideas in the future.

On the other hand, this organization values innovation, initiative and risk taking. When readers of *R&D Magazine* were asked the same question this year, 52 per cent agreed. (Reported in the July 1990 issue of *R&D Magazine*). How will your responses compare?

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Know your audience and tailor the message

Dr. Jeffrey Crelinsten, president of the Canadian Science Writers' Association and a partner in The Impact Group, a Toronto consulting firm specializing in science and technology policy, communications and education, addressed the Research Committee of the Alberta Research Council in October. His topic was, "The Public Awareness Business and the Business of Public Awareness."

Here are some excerpts from Dr. Crelinsten's talk:

News Versus Public Awareness:

Do you want to change public opinion about the importance of research? Do you want to convince young people to go into research careers? The media is a powerful force, but it is likely not the best vehicle for these larger public awareness goals.

The biggest difference between news and public awareness is time. News is ephemeral. Public awareness is long-lasting.

Media relations is a skill and should be utilized when appropriate. That is part of the public awareness business. But the business of public awareness does not necessarily mean getting into the news. Raising public awareness involves changing public attitudes.

Probably the most important thing to know about public awareness is that there is no such animal as "the public". There are only audiences. The particular goal determines both the audience and the message to communicate. If the goal is to promote research, the following is a list of messages for different audiences:

Audience	**Message**
Children	Research is fun
Teachers	We can help you teach science and technology to your students
Parents	Research in science and technology is a good job for your child Your child can help solve the environment crisis by getting a good research job
High school students	You can make a good living by doing, managing or financing research You can help solve the environment crisis by doing research
CEOs/ Shareholders	Research and development is a critical investment for company survival
Human Resources directors	Promoting science and technology is critical so we can recruit high quality people
Public Relations directors	Public awareness is as important as advertising
Government	Supporting research and development provides jobs, increases the tax base, ensures there is a country to govern in the future

For each audience, there is a particular message. And each message is related to the overall public awareness goals in different ways.

The Key To Changing Attitudes – The Youth Audience

Most children in school today will be voting before the turn of the century. Even taking the primary grades, these children will be voters in the first years of the next decade. If you can reach all these youngsters over the course of the next 10 years, you will see the effects within the decade.

Students who make the decision to embark on a path that will lead them to the door of your personnel department make the decision before they reach voting age.

The best way to target youth in school is by providing their teachers with something they need. If fulfilling that need also fulfills your own objectives, then everyone wins. What teachers need is Canadian material that helps them tell their students about science and technology in Canada. They want help.

The question is how to do this effectively. There are three steps:

1. **Develop a strategy** – what specific goals do you want to achieve, what audiences do you want to target and what message do you want to convey?
2. **Develop a specific program** – choose the most effective techniques for accomplishing the strategy. Be sure to include ways to evaluate the program.
3. **Publicize the Program** – now that you are actually doing something, let people know about it. Make the launch of the program an event. Announce any results you achieve.

Making It Happen

As researchers well know, it takes money to carry out an effective research program. The same is true for a public awareness program.

First of all – do your research. What is going on in the schools? What people in the education system need your help most – teachers, guidance counsellors, curriculum developers? What topics of interest to you are also of interest to them?

Then you can go on to your three steps of strategy formulation, program development and publicity. There is a tremendous market opportunity now, because of what is going on in the school science and technology programs. Find the money and do it. Then let people know what you are doing.

If you don't do it nobody else will!

ON THE MOVE

Secondment/appointments announced

Al Turak, Coal and Hydrocarbon Processing, was seconded to Alberta Energy, Research and Technology Branch, for two years, effective October 15, 1990. Here, Al will be working as senior research manager for Coal Production, Transportation and Utilization in the office of Coal Research and Technology (AOCRT).

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Dr. Sujit Chakrabartty, Coal and Hydrocarbon Processing, will spend December 2 to 12 in Tokyo, Japan, as a participant in the NEDO (New Energy and Industrial Technology Development Organization) Coal Engineer Training Program.

Each year, the Japanese Ministry of Education and Ministry of Industry and International Trade select a group of Japanese engineering graduates and arrange for them to meet with foreign experts to exchange information and gain exposure to overseas experiences. Dr. Chakrabartty was one of only two Canadians chosen to participate this year. Other foreign participants were selected from Australia (5) and the United States (1).

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Dr. George Sedgwick, Oil Sands and Hydrocarbon Recovery, was recently appointed by the Canadian Engineering Accreditation Board to serve on a committee set up to review the accreditation of the Engineering Physics program at the University of Alberta.

★ ★ ★

LIGHTER SIDE

Winter sports – all year long

The technical staff in Forestry didn't need snow and ice to enjoy a little hockey this fall. In fact, for the past year, they have foregone their usual afternoon caffeine break, taking an invigorating 15-minute hockey break instead. Pictured from left: Doug Coolidge, Grant Reekie, David Bilyk, Peter Taylor, Dave Kufeldt.

Employee changes

We welcome to the Alberta Research Council: **Belinda Edwards,** Manufacturing Technologies; **Cindy Harris,** Oil Sands and Hydrocarbon Recovery; **Ken Hinz,** Environmental Research and Engineering; **Hanna McCrae,** Administrative Services; **Roberta Morrison,** Oil Sands and Hydrocarbon Recovery (ALIS); **Brian Murray,** Administrative Services; **Ken Seidel,** Forestry; **Jamie Stanley,** Administrative Services; **Mary Swanek,** Manufacturing Technologies; **Jeff Watson,** Manufacturing Technologies; **Dianne Wood,** Coal and Hydrocarbon Processing.

We wish the following well in their future endeavors: **Kelly Furtak,** Oil Sands and Hydrocarbon Recovery; **Dr. Zac George,** Coal and Hydrocarbon Processing; **Alice Grimsen,** Calgary Operations; **Walter Hutniak,** Corporate Communications; **Donald Keith,** Alberta Geological Survey; **Nanik Khiamal,** Oil Sands and Hydrocarbon Recovery; **Mike Malychuk,** Coal and Hydrocarbon Processing; **Dr. Henry Meng,** Coal and Hydrocarbon Processing; **Shaun Serediak,** Oil Sands and Hydrocarbon Recovery; **Dr. Terry Stone,** Oil Sands and Hydrocarbon Recovery; **Kevin Wipond,** Advanced Computing and Engineering.

LETTERS

Work of panel lab draws praise

During the first week of October, the Forest Products Panel Laboratory successfully carried out pressing experiments for the Michigan Technological University. The experiments were used to demonstrate a new technology to "movers and shakers" of the OSB (oriented strandboard) industry.

The quality of the work and services provided by pilot plant staff prompted the following written comment from Robert Palardy, research scientist at the university. "Your wood composites lab has the best capability that I know for large panel preparation and data acquisition during pressing. I was also very impressed with the quality of your lab assistants..."

CORPORATE NEWS

Alberta Research Council awards update

If you are planning to nominate one or more colleagues for an Alberta Research Council award this year, you now have one more category from which to choose.

The new award is for Technology Transfer and will recognize an outstanding achievement to the organization through the transfer of a significant technological activity from within the Research Council into the private or public sectors.

A winning submission will mark a significant provincial, national or international commercial, social or public benefit. The contribution may have occurred at any time during the previous 10 years, but it must have had a measurable technological and economic external impact.

Normally, all current employees, including research fellows and management, as individuals or teams in any area of science, engineering or technology, are eligible. The roles and responsibilities of each team member must be identified on the nomination form.

Former employees, including deceased individuals, may also be eligible for this award, recognizing that technology transfer can take varying lengths of time to mature and become recognizable for its full impact.

Since the award encompasses such a variety of technology transfers, one measurable criterion may not be suitable. It must, however, have **both** demonstrable, technological **and** economic impact as a criterion to measure the significance of the impact of the technology transfer. The nomination must be supported by the beneficiary of the technology transfer.

Only one award will be presented each year, except in the case of a tie. The award has a monetary value of $2,000 and the recipient will receive a memento. A replica of the memento and a framed certificate will be presented to the company.

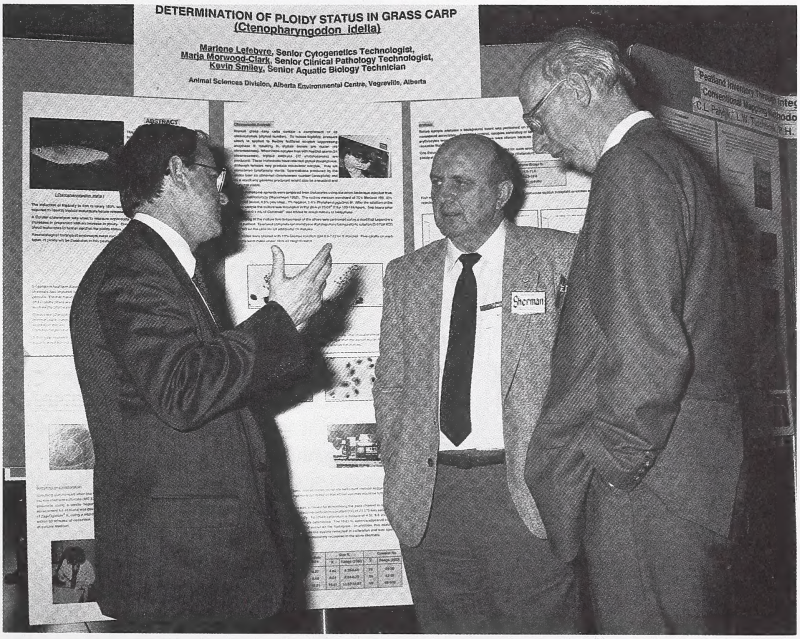
The award will be presented by the chief executive officer of the company and by the president of the Alberta Research Council.

Nominations for all staff recognition awards must be submitted to Dorothy Hollands, corporate secretary and director of Corporate Communications, by January 4, 1991.

In addition to the new category, the cash award to recipients of the Past Presidents' Awards of Excellence has been increased to $2,000 from $1,000. The award also has been adjusted to recognize achievements which have occurred over a time span of more than one year.

For the first time, recipients of a 1991 award will be recognized at a presentation including all staff, in addition to a function hosted by our Board of Directors for awardees and their spouses/guests.

AEC visit promotes promising future


DETERMINATION OF PLOIDY STATUS IN GRASS CARP
(Ctenopharyngodon idella)
Marlene Lefebvre, Senior Cytogenetics Technologist,
Marja Morwood-Clark, Senior Clinical Pathology Technologist,
Kevin Smiley, Senior Aquatic Biology Technician
Animal Sciences Division, Alberta Environmental Centre, Vegreville, Alberta
ABSTRACT
Sherman

Approximately 50 guests from the Alberta Environmental Centre (AEC), Vegreville, Alberta, visited the Alberta Research Council's headquarters building November 16. The event was designed to increase the level of awareness in the two organizations regarding each other's R&D activities and capabilities. It included a series of presentations, tours and poster presentations. Pictured are (left to right): Dr. Bob Fessenden, vice-president of Natural Resources, Alberta Research Council; Dr. Sherman Weaver, executive director, AEC; and Dr. Bart Bolwyn, director of Special Projects, AEC.

Employees meet United Way goal

Congratulations to Alberta Research Council staff, this year's United Way organizers and canvassers on a successful campaign.

Employees contributed $42,750 or 102 per cent of the $40,000 goal. The percentage of staff participation, while slightly below the organization's target of 75 per cent, remained constant at 69 per cent.

Information Services, Facilities Planning and Engineering, and Occupational Health, Safety and Hygiene are to be applauded for achieving a 100 per cent participation rate. Congratulations also to our top three contributors; Oil Sands and Hydrocarbon Recovery ($6,349), Coal and Hydrocarbon Processing ($4,407) and Alberta Geological Survey ($3,450).

STAFF NOTES

Advanced Computing and Engineering – Dr. Kalev Ruberg, advisory knowledge engineer from IBM Canada Ltd., Don Mills, Ontario, recently visited the department to check the progress on the IBM project.

Asked why IBM chose the Alberta Research Council to work on this project, Dr. Ruberg replied that the Research Council has a good track record in applying the sort of systems that IBM is looking for and offers the best of both the academic and business worlds. He feels the Research Council is more familiar with the needs of business and recognizes what realistically can be done. Dr. Ruberg is very pleased with the work the Research Council team is doing, in cooperation with the National Research Council's Debbie Leishman, and feels excellent progress is being made on the project.

As distance and security considerations limit direct communication with the Research Council for stretches of time, IBM needed a team that could work independently with very little direction and this team is doing, in Dr. Ruberg's words, "a superb job." Way to go **Marco Ariano, Ken Gamble and Debbie Leishman.** (excerpted from the October 15, 1990 edition of "Yopsters' Yap", written by Advanced Computing and Engineering's Penelope Rokeby.)

★ ★ ★

Coal and Hydrocarbon Processing – Daryl Woycenko is a recipient of a 1990/91 Luscar Graduate Scholarship in Environmental Engineering from the University of Alberta (U of A). The scholarship has a value of $6,500 and is awarded each year to three graduate students pursuing research related to reducing the environmental impact of fossil fuel use.

Daryl currently works part-time on an in-house project and part-time on his Masters' degree in Mechanical Engineering at the U of A. His winning research involves designing and building a system for simultaneously measuring coal particle size, temperature and velocity in a combustion environment, using two-color pyrometry. The data collected from this research will provide fundamental information regarding the burning behavior of Alberta coals under a variety of conditions, hopefully leading to a cleaner, more efficient use of coal in pulverized coal combustion.

★ ★ ★

The Coal and Hydrocarbon Processing Department hosted two Canada-India exchange students in October. **Vansh Pal Singh** of Chandigarh, India, and **Daniel Laroche**, Quebec, were sponsored by the Canada World Youth Organization. While with the department, they gained experience in preparing catalysts, loading and operating a pressure reactor, taking samples and recording results. Both left for Karnataka, India, November 1, for three months in a new work environment. Daniel will return to Devon in February, 1991, to make a presentation on his experiences in Devon and India to department staff.

★ ★ ★

Oil Sands and Hydrocarbon Recovery – Twenty-seven grade 4 students from the Mill Woods Christian Academy visited Clover Bar in November. While there, each performed a hot water extraction experiment. They also learned what sludge is and were shown various oil sand from all over the world.

TALKBACK

Why do staff leave? Is it ever a good thing?

The Research Committee minutes (rc900710) note the following: "Dr. Chang [head of Advanced Computing and Engineering] noted that several employees have left the Calgary office due to higher salaries being offered in industry. Don Peckham [head of Human Resources] said the experience of Human Resources is that salary is not the main reason for employees leaving…"

This begs several questions: What are the real reasons why employees leave the Research Council? Were these discussed? If they were, why were they not recorded in the minutes? If they were not, why?

The same minutes also note: "In the ensuing discussion, it was suggested that Research Council staff moving out into the private sector is a form of technology transfer and should not be considered a negative, but viewed as being beneficial both to the Research Council and Alberta industry."

This "suggestion", unfortunately, is not assigned to any particular member of the Research Committee. It is never a good sign when valuable employees leave an organization such as the Alberta Research Council. The "suggestion" is really an excuse being made by the Committee for its shortcomings in the area of human relations!

Amin Bardai, Information Systems

Employee turnover has been a hotly debated issue in every organization with which I have been involved and the Alberta Research Council is no exception.

One school of thought is that when an employee leaves, it is because there has been a "falling out" between the organization and the employee, probably due to unfulfilled promises or aspirations. There is another perspective which views moderate employee turnover as a healthy sign, a form of technology transfer. In fact, feedback on our draft Corporate Plan suggests that the Research Council should be more proactive in providing project assignments for individuals moving between universities and industry (in both directions).

On a personal level, I hope that our staff will find that work at the Research Council is so rewarding that they will remain with us as a career choice. But I know this will not happen in all cases.

Our Human Resources Department carries out interviews with all departing employees and this information is held confidential, unless permitted otherwise by the employee.

The general reasons for leaving are available for review by the Research Committee. Two major reasons given are personal reasons and career advancement. Personal reasons include maternity, return to school and transfers by a spouse. Employees who leave for career reasons do so when they find their career blocked in their present position, or when they see better opportunities elsewhere. Higher salaries are quite possibly a component of such decisions, but this reason is seldom identified.

It is the job of management to try and resolve as many of the career advancement issues as possible. We should, and can, do better in this function. But, when all is said and done, we should wish departing employees well and hope we can develop continuing relationships with them in their new career.

Clem Bowman, President